



# Council on Efficient Operations

## Vehicle Management in State Government

*An Analysis of Practices and Methods*

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# Vehicle Management in State Government

## *An Analysis of Practices and Methods*

### **Introduction**

As private businesses have sought to reduce capital investments and operating expenses, many have focused on managing high-dollar investments through appropriate techniques. One such practice is that of fleet management. With capital investments starting around \$50 million and annual operating expenditures over \$10 million, large business like Southwestern Bell Telephone Systems and General Electric, have realized that proper fleet management is essential.

While fleet management has positively affected many businesses, governmental agencies are only beginning to implement the important practice. In fact, the federal government took its first steps just over a decade ago, when it passed the Consolidated Omnibus Budget Reconciliation Act of 1985. This act required all federal agencies to improve the management and efficiency of fleets.<sup>1</sup> Likewise, only a handful of state and local governments have made efforts to improve fleet operations.

With over 3 million vehicles on the road, governments should take appropriate steps to help minimize fleet costs. However, many fleets do not implement fleet management due to a lack of knowledge about the practice and a lack of importance placed on the fleet.<sup>2</sup>

This paper intends to address both the lack of knowledge and the level of importance by discussing fleet management. The purpose of this paper is to identify management practices (factors) that both public and private fleets consider essential to fleet efficiency, including administrative structures, fleet size, policies, utilization, purchasing and disposal, maintenance, and management information systems. Additionally, the relationship between these factors and fleet costs will be analyzed.

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<sup>1</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 2.

<sup>2</sup> American City & Government. *Accidents happen, but most can be prevented*. American City & County. July 1997, Pg. 10.

As a tool for benchmarking, the analysis will provide a literature review, describing the importance of each of these factors. Second, the analysis will discuss the methodology used to investigate fleet management practices. The paper will then analyze fleets and provide data on state-level fleets. Finally, the analysis will provide a conclusion and recommendations for fleet managers.

## **Literature Review**

Due to the need to streamline and cut costs, fleet management is becoming more popular in the public sector. More than ever before, governments are paying closer attention to their fleets, reviewing their management practices to ensure optimal efficiency. The government's hope is that by instituting the right policies, practices, and management tools, they can effectively manage these multi-million dollar investments.

A 1994 federal fleet study by the General Accounting Office suggests that fleet management is becoming more complex, requiring more professionalism. Over the past decade, fleet management has begun shifting from the simple act of purchasing vehicles, parts, and services, to a more comprehensive approach to managing fleet resources.<sup>3</sup> The GAO's report also suggests that fleet management has become more business-oriented by using proven management practices, statistical analysis, and standards. Likewise, the study also suggests that fleet management is beginning to consider the needs of customers, or those utilizing the fleet.<sup>4</sup>

Given this change in the nature of fleet management, government officials speculate that certain management practices significantly affect fleet costs (cost per mile). While there are few published studies concerning public or private fleet costs, the GAO suggests that fleets should benchmark and compare themselves against other fleets. The factors that affect cost, as identified by the GAO, include: centralization and administrative structure, vehicle policies, fleet costs, vehicle utilization and assignments, and management information systems.<sup>5</sup>

## **Administrative Structures**

The administrative structure, including the organization and funding of the fleet, is the foundation of fleet management. In government, the fleet's organization determines its funding. Organizations with decentralized fleets are typically funded through annual appropriations. Organizations with more centralized fleets typically have revolving funds, which invoice users on a monthly basis. In both cases,

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<sup>3</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 5.

<sup>4</sup> Ibid. Pg. 22.

<sup>5</sup> Ibid.. Pg. 6.

structure, whether decentralized-annual appropriation and centralized-revolving fund, impacts fleet efficiency.

Annual appropriation funding presents a unique challenge, in that it often prevents managers from replacing vehicles in a timely and economical manner. The United States Department of Agriculture found it could not maintain an adequate replacement schedule given its appropriated funds. In 1994, the USDA's fleet was 10 to 11 years old, 4 to 5 years beyond what officials considered optimal.<sup>6</sup> Likewise, Florida state agencies received less than 30% of the funds requested for vehicle acquisition in 1995 (\$26.7/\$93.6 Million), thus preventing vehicle replacement.<sup>7</sup> The age of both the USDA's and Florida's vehicles resulted in significant downtime, high repair and maintenance costs, unreliable transportation, and increased fuel consumption.<sup>8&9</sup>

While annual appropriations present challenges to fleet efficiency, the use of self-supporting revolving funds may be a positive alternative. Under this approach, a single agency supplies other agencies with vehicles through in-house leasing. Since the revolving fund is self-supporting, lease rates must be based on all costs of the centralized pool. Revenues collected by the fund are used to purchase, replace, maintain, and dispose vehicles in a more efficient manner.<sup>10</sup> The General Services Administration's (GSA) Interagency Fleet Management System (IFMS) is funded entirely from fees charged to customer agencies. Customer agencies receive no annual appropriation for vehicles, yet do receive expense funds for leasing vehicles.<sup>11</sup>

Revolving funds used in conjunction with an effective management information system create a powerful set of tools for fully identifying fleet costs. In addition, since revolving funds are based on actual costs, fleet costs are more visible to users, providing them an incentive to be more judicious in their vehicle use.<sup>12</sup>

## **Policies, Rules, and Practices**

Well-documented policies play an integral role in controlling organizational and operational costs. First, policies set standards (performance, efficiency, etc) that the fleet must meet. In turn, these policies result in cost-avoidance for those costs that are not incurred due to compliance with the policies. Additionally, the written

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<sup>6</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 18.

<sup>7</sup> The Florida Legislature. *Review of State Vehicle Fleet Purchasing*. May 1997. Pg. 2.

<sup>8</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 18.

<sup>9</sup> The Florida Legislature. *Review of State Vehicle Fleet Purchasing*. May 1997. Pg. 3.

<sup>10</sup> Ibid. Pg. 5.

<sup>11</sup> Adelsberger, Bernard. *Wheeler dealers*. Government Executive. Vol. 29, No. 7. July 1997. Pg. 35.

<sup>12</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Page 27.

policies, or expectations, provide management increased leverage when presented with legal challenges.

According to Philip Crosby, author of *Quality is Free*, *Quality Without Tears*, and *The Eternally Successful Organization*, written policies set operational and performance standards. Crosby states that policies serve as a list of requirements, and ultimately, meeting the right requirements can reduce costs and improve quality. These policies must be written and communicated throughout the organization. "Spoken" policies are often considered inconsistent and less valid, while written policies communicate the same language and meaning each time.<sup>13</sup>

As guidelines, written policies can lower costs by preventing incidental costs and safeguarding against lawsuits. Policies help avoid costs by communicating what is acceptable and what is not.<sup>14</sup> By communicating such requirements, employers not only stop unneeded costs; they also prevent costs associated with policy violations. For example, a policy requiring standard octane fuel to be purchased, rather than high octane fuels, tells employees to what to purchase. In Missouri's case, such a policy is predicted to save over \$750,000 annually.<sup>15</sup> Another example is when an employer's policy states that employees cannot drive while under the influence of alcohol or drugs. If an employee did violate the policy and have an accident, the employee could be held legally responsible for costs associated with the accident and subsequent repairs, rather than the fleet.<sup>16</sup>

Few fleets have written policies despite their potential benefits. The Mississippi PEER Committee found that 41% of Mississippi fleets do not have policies on permanent vehicle assignments, while 52% do not have policies to control personal commuting in fleet vehicles. In these cases, the fleet could incur costs it should not. Additionally, the lack of a policy creates an opportunity for abuse and potential violations of the commuting regulations in the Internal Revenue Service code.<sup>17</sup>

A 1997 study by the Florida Legislature also suggests that a policy regulating commuting could reduce fleet costs. The study reviewed 4,693 assigned vehicles and found that 653 vehicles were assigned to employees who commute between home and work on a daily basis. In 151 of the cases, commuting miles accounted for more than 50% of the miles driven, while, in an additional 13 cases, the commuting miles accounted for over 90% of the miles. In total, the study found that the 653 vehicles drove a total of 11.2 million miles, of which 3.6 million miles

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<sup>13</sup> Kemeny, John. *Check the manual*. Mortgage Banking, December 1996. Vol. 57 No. 3. Pg. 71.

<sup>14</sup> Buhler, Patricia. *Administering Discipline in the Organization*. Supervision. November 1993. Vol. 54 No. 11. Pg. 17.

<sup>15</sup> Missouri Council on Efficient Operations. *Vehicle Management and Maintenance - Opportunities to Improve the State of Missouri's Vehicle Fleet Efficiency*. August 20, 1997. Pg. 40.

<sup>16</sup> Hage, Bill D. *Employers should put traffic safety programs into high gear*. San Antonio Business Journal. September 22, 1995. Vol. 9 No. 36. Pg. 26.

<sup>17</sup> Peer Committee. Mississippi Legislature. *A Performance Audit of State Owned Vehicle Management*. December 14, 1993. Page 12.



(32%) were for commuting purposes.<sup>18</sup> The Florida Legislature suggests this is a clear example of resource abuse, which a written policy could address.

## **Fleet Costs**

While various factors may affect fleet costs, the financial methodology used by the fleet is also important. In many instances, government organizations can not calculate their actual cost of operation, due to inconsistent cost-accounting techniques.<sup>19</sup> This inconsistency stems from a lack of knowledge on how to define costs, and which costs to include.<sup>20</sup> Ultimately, the inconsistency and lack of knowledge leads to false cost estimates.<sup>21&22</sup>

With a lack of uniform cost-accounting guidance, fleets face difficulties performing cost-comparison studies. Without comparing "apples to apples," fleets can not fairly determine whether it would benefit from consolidation, leasing, or some other action. As a result, fleet management studies often can not predict meaningful and beneficial changes.<sup>23</sup>

While many fleets do not fully account for all their costs, there are tools available to assist fleet managers. The Office of Management and Budget (OMB) has developed a set of tools for cost comparison. The documents include: 1) minimum quality standards, 2) a cost-comparison handbook, and 3) a cost accounting.<sup>24</sup> The cost accounting guide includes principles and standards for agencies to determine costs, including obligations and outlays incurred in the operation, maintenance, acquisition, ownership, and disposition of federal motor vehicles.

## **Fleet Utilization**

Fleet utilization is another factor that significantly affects the cost of fleets. In fact transportation industry experts believe that optimizing vehicle use is the most effective and rapid way to improve fleet efficiency. By assessing vehicle

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<sup>18</sup> The Florida Legislature, Office of Program Policy Analysis and Government Accountability. *Review of the Use of Assigned State Vehicles*. July 29, 1997. Pg. 2.

<sup>19</sup> Mason, George. *No government service costs what they say it does* Pacific Business News. September 22, 1997, Vol. 35 No. 28. Pg. 10.

<sup>20</sup> Boyd, Lynn H. *The use of cost information for making operating decisions*. Journal of Cost Management. May/June 1997. Vol. 11, No. 3. Pg. 42.

<sup>21</sup> Mason, George. *No government service costs what they say it does* Pacific Business News. September 22, 1997, Vol. 35 No. 28. Pg. 10.

<sup>22</sup> Boyd, Lynn H. *The use of cost information for making operating decisions*. Journal of Cost Management. May/June 1997. Vol. 11, No. 3. Pg. 42.

<sup>23</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 15.

<sup>24</sup> Ibid. Pg. 16.

utilization, the fleet can identify opportunities to streamline the fleet through vehicle reassignments, reductions, and characteristic changes.<sup>25</sup>

Vehicle reassignments allow fleets to optimize their utilization rates, by taking vehicles away from employees who drive just a few miles. The State of Florida did just that as it identified employees, who are assigned vehicles, yet do not drive enough to justify the assignment.<sup>26</sup> Fleets that do analyze vehicle utilization often set minimum standards for the number of miles a vehicle should be driven. Fleets in the states of Missouri and Kansas, for instance, have set their minimum range at 15,000 miles per year.<sup>27&28</sup>

Determining the optimal fleet size is a second step that can improve the fleet's utilization. By analyzing travel needs and the number of trips taken, miles driven, and vehicles used, the fleet can determine the number of vehicles needed. A performance audit conducted on the State of Kansas' motor pool found that it is stocked to meet peak demand. However, the peak demand seems to be measured by assumption, rather than fact. During fiscal year 1997, fleet staff reported no instance where a request for a vehicle was not met. Using trip tickets and miles driven as decision criteria, the motor pool was decreased by 37 vehicles. Although this appears to be a progressive move toward efficiency, a critical piece of information is missing from the picture: the motor pool has not monitored the actual number of vehicles in use each day.<sup>29</sup>

Recent management reviews of fleet operations found that those fleets not conducting a comprehensive needs analysis often cannot determine the current or appropriate size of their fleet. A Missouri study found that fleets determine their size based on appropriations and assumptions; at the same time, the state could not determine the total number of passenger vehicles in operation until recently.<sup>30</sup> A 1993 Mississippi study found that vehicle numbers were not being measured. In fact, the state's passenger vehicle inventory stood at 4,622 vehicles, while state law only authorized 1,204 vehicles. At that time Mississippi had 284% more vehicles in service than authorized by law. Failure to perform a needs analysis was cited as having contributed to this excess inventory.<sup>31</sup>

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<sup>25</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 22.

<sup>26</sup> The Florida Legislature. Office of Program Policy Analysis and Government Accountability. *Review of State Vehicle Fleet Purchasing*. May 1997. Pg. 6.

<sup>27</sup> Missouri Council on Efficient Operations. *Vehicle Management and Maintenance - Opportunities to Improve the State of Missouri's Vehicle Fleet Efficiency*. August 20, 1997. Pg. 29.

<sup>28</sup> Kansas Division of Motor Fleet. *Policies and Procedures*.

<sup>29</sup> Legislative Division of Post Audit, State of Kansas. *Performance Audit Report: Determining Whether the State's Current Motor Pool System Provides for the Use of Cars at the Lowest Possible Cost to the State*. November 1997. Pg. 8.

<sup>30</sup> Missouri Council on Efficient Operations. *State-Owned Vehicle Statistics Report*. February 1997.

<sup>31</sup> Peer Committee. Mississippi Legislature. *A Performance Audit of State Owned Vehicle Management*. December 14, 1993. Pg. 10.

Finally, many fleets have improved vehicle utilization by changing the types of vehicles owned or used. The General Accounting Office reports that one fleet saved over \$796,000 by updating its fleet and replacing vehicles. The fleet replaced 41 full-sized vehicles with mid-sized vehicles, eliminated 42 high-mileage, high-maintenance vehicles, and reassigned vehicles to meet needs. The change from full-sized to mid-sized saved \$700 per vehicle alone. The fleet also plans to replace its full-size vans and station wagons with mini-vans, since they have a lower purchase price and lower operations costs.<sup>32</sup>

## **Fleet Management Methods and Systems**

A management information system, when properly maintained and utilized, can be the cornerstone of a successful fleet operation. Fleet experts agree that having the needed information supported by a good management information system is essential for efficient management of resources.<sup>33</sup>

During decision making, management relies on accurate and timely information on all aspects of the fleet. This information is essential for almost every fleet activity including vehicle acquisition, operations, utilization, maintenance, and disposal. At a minimum, the information system should supply accurate information relating to the life-cycle of each vehicle. This information should allow a comparison of fleet costs and benefits between the organization's fleet and fleets of other organizations.<sup>34</sup>

A study by the Missouri Council on Efficient Operations found that without a designated fleet management program, fleets would attempt to track themselves in a variety of manners, with varying degrees of success. The study noted that some fleets tracked their vehicles on paper, while others used computerized systems. The paper-based groups had difficulty compiling information, and often could not provide basic information such as the average number of miles driven each year, or the average purchase price of a vehicle class. Computerized systems varied in their reliability, in that some fleets tracked vehicles on electronic accounting spreadsheets while others had fully integrated fleet management systems. Those with the fully integrated systems were more able to provide and analyze information on their fleet.<sup>35</sup>

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<sup>32</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 23.

<sup>33</sup> Doherty, Katherine. *For accuracy, not efficiency*. U.S. Distribution Journal. July 7, 1996. Vol. 223, No. 7., Pg. 34.

<sup>34</sup> GAO. *Federal Motor Vehicles: Private and State Practices Can Improve Fleet Management*. December 1994. Pg. 24.

<sup>35</sup> Missouri Council on Efficient Operations. *Vehicle Management and Maintenance - Opportunities to Improve the State of Missouri's Vehicle Fleet Efficiency*. August 20, 1997. Pg. 20.

## Methodology

### The Survey Design

The Missouri Council on Efficient Operations surveyed state governments and United States Territories to gather qualitative and quantitative information on state fleet characteristics and management practices. Although some data is available from various state audits and the National Association of Fleet Administrators (NAFA), the CEO chose to develop its own survey to ensure consistency and reliability of fleet definitions and data.

### Population and Sample

The survey was sent to at least one individual in each state and U.S. Territory. The initial survey list was developed by the Council of State Governments, see Appendix A.<sup>36</sup> Attempts were made to contact all list members to ensure name and address accuracy. A revised list of respondents was developed as some names changed, and as contacts noted other fleets within their state government.

A total of 67 surveys were sent to individuals in 50 states and 5 U.S. Territories. A total of 63 surveys were returned by 20 states. The response rate for the survey is 94.03% for all surveys sent, 40% for states, and 0% for territories.

### Instrumentation

The survey instrument was developed by staff of the Council on Efficient Operations after a review of fleet management literature, state fleet audits, NAFA information, and discussions with private sector leasing companies. The survey contained 10 sections, each focusing on different types of data, including:

- General Information
- Administrative Structures
- Fleet Size and Characteristics
- Policies, Rules, and Practices
- Fleet Costs
- Fleet Utilization
- Purchasing and Disposal of Vehicles
- Maintenance Services
- Fleet Management Methods and Systems
- Interagency Cooperation/Legislative Relations

The survey provided both check-off boxes and open-ended spaces for respondents to list or write answers. Responses to check-off boxes were 1) yes or no; 2) percentage ranges; or 3) levels of agreement.

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<sup>36</sup> Council of State Governments. "Fleet Managers" *State Leadership Directory - State Administrative Officials Classified by Function*. 1996. Pg. 159-161.

A preliminary survey was pre-tested in interviews with 5 fleet managers or administrators responsible for administration of the fleet within Missouri state government. The survey was refined and mailed in late November 1997. The Missouri Council on Efficient Operations mailed a letter of introduction with the survey to explain the purpose and intended analysis of the survey. This letter is included in Appendix B. A copy of the survey can be found in Appendix C.

Survey respondents were asked to complete the survey within a 2 1/2-week time frame. However, surveys used were collected over a 1-month time frame.

### **Variables in the Study**

The survey focused on a variety of factors that can be used to describe the general characteristics of state fleets and can provide data on fleet management practices. The survey variables are detailed in Table 1.

### **Data Analysis**

Returned data was coded into a MS Excel Spreadsheet. Yes and No responses were coded as 0 and 1, while levels of agreement (disagree, somewhat disagree, NA, somewhat agree, and agree) are 0, 1, 2, 3, and 4. Information on maintenance providers (state, both state and private, and private) was coded as 0, 1, and 2. Data on mileage, cost, and other figures were imported as-is.

Each question was analyzed in a variety of manners. First, a state mean and a fleet mean were computed. In some instances, such as in the case of annual mileage and purchase price, it was necessary to calculate a weighted mean, by factoring in the number of vehicles. Likewise, it was also necessary to combine fleets within a given state for some questions. Thus, analyzed data will either refer to figures by either state or fleet. Depending on the question, data was analyzed by correlating it to cost or another factor, or it was simply analyzed by the mean.

In general, the data collected seemed unbiased, since it was collected from a population. However, responses were self-reporting and the entire population did not report. Researchers feel one reason many states or fleets did not report is their inability to answer many of the questions. The survey called for actual numbers, percentages, and other figures that may be difficult to calculate for some fleets.

A review of the reporting fleets' responses suggests three flaws in the survey and subsequent analysis. First, it is evident that not all fleets keep similar fleet data. Second, several fleets gave estimations based on hearsay, rather than calculations; researchers attribute the cause of this to the lack of standards on what data to keep, as well as the lack of computerized fleet management/tracking systems. Third, fleets have different methods for tracking cost per mile for their vehicles. This is perhaps the greatest error, in that some fleet report a very low cost per mile, so low that researchers question how the cost per mile could even include fuel.

**Table 1.**  
**Variables, Research Questions, and Items on Survey**

<b>Variable Name</b>	<b>Research Question</b>	<b>Item on Survey</b>
Degree of Centralization	<ul style="list-style-type: none"> <li>How many states have centralized fleets?</li> <li>How does centralization of the fleet affect cost?</li> </ul>	2-(1,2,3,4,5,6,7,& 8)
Administrative Structure	<ul style="list-style-type: none"> <li>How are fleets structured administratively?</li> <li>How does administrative structure affect cost?</li> </ul>	2-7;9-6
Payment/Financial Structure	<ul style="list-style-type: none"> <li>How do fleets pay for their vehicles?</li> <li>Do they lease or buy?</li> </ul>	2-9; 3-6
Vehicle Condition	<ul style="list-style-type: none"> <li>What is the general condition of fleet vehicles?</li> <li>How does administrative structure and centralization affect condition?</li> <li>How does condition of vehicle affect cost?</li> </ul>	3-(1,2,&3)
Vehicle Location	<ul style="list-style-type: none"> <li>Are fleet vehicles mostly located in urban areas?</li> <li>How does vehicle location relate to cost?</li> </ul>	3-(4&5)
Vehicle Make	<ul style="list-style-type: none"> <li>Which vehicle manufacturers do fleets primarily purchase from?</li> <li>Do centralized fleets purchase one manufacturer's vehicles over another?</li> </ul>	3-(7,8,9,10,11,12,&13)
Vehicle Type	<ul style="list-style-type: none"> <li>Which types of vehicles do fleets purchase?</li> <li>How does vehicle type affect cost?</li> </ul>	3-(14,15,&16)
Purchase Price	<ul style="list-style-type: none"> <li>What is the average purchase price?</li> <li>How does the purchase price affect fleet cost?</li> </ul>	5-(12)
Cost per Mile/Make & Type	<ul style="list-style-type: none"> <li>What is the average cost per mile?</li> </ul>	3-14
# of Vehicles/Make & Type	<ul style="list-style-type: none"> <li>How many vehicles do states own?</li> <li>What is the average number of owned vehicles?</li> </ul>	3-15
Annual Mileage	<ul style="list-style-type: none"> <li>What is the average annual mileage?</li> <li>How does mileage affect cost?</li> </ul>	3-16
Vehicle Policies	<ul style="list-style-type: none"> <li>What policies are used by states?</li> <li>How do vehicle policies affect cost?</li> </ul>	4-(1,2,3,4,5,6,&7); 5-2
Tracking and Monitoring of Use and Assignment	<ul style="list-style-type: none"> <li>How do states track and monitor their fleet?</li> <li>How does tracking and monitoring affect costs?</li> </ul>	6-(1,2,3,4,5,&6)
Fleet Purchasing (vehicles, maintenance, fuel, and parts)	<ul style="list-style-type: none"> <li>Do fleets purchase vehicles centrally?</li> <li>How does centralized purchasing affect cost?</li> <li>Do fleets have policies regarding specifications?</li> <li>How do vehicle purchasing policies affect cost?</li> </ul>	7-(1,2,3,4,5,6,&7)
Vehicle Disposal	<ul style="list-style-type: none"> <li>How do fleets dispose of their vehicles?</li> <li>How do disposal methods affect cost?</li> </ul>	7-(8,9,10, 11,12,13,14, 15,16,17,&18)
Maintenance Programs	<ul style="list-style-type: none"> <li>How do fleets maintain their vehicles?</li> <li>How do maintenance programs affect cost?</li> </ul>	8-(1,2,3,4,5,6,7,8,9, 10,& 11)
Maintenance Providers	<ul style="list-style-type: none"> <li>Do fleets utilize internal/external maintenance providers?</li> <li>What is the relationship between cost and privatized or internal maintenance?</li> </ul>	8-(12,13,14,&15)
Vehicle Use	<ul style="list-style-type: none"> <li>How are fleet vehicles used?</li> <li>How does use affect cost?</li> </ul>	
Fleet Management System and Procedures	<ul style="list-style-type: none"> <li>What fleet management systems are used?</li> <li>How does the type of fleet management system relate to cost?</li> </ul>	9-(1,2,3,4,&5)
External Relationships	<ul style="list-style-type: none"> <li>How do fleets relate to one another, the Governor, and the legislature?</li> </ul>	10-(1,2,3,&4)

## **Analysis**

An analysis of survey suggests that a relationship does exist between fleet management techniques and fleet costs. The analysis correlated administrative structures, fleet size, policies, utilization, purchasing, maintenance, and management systems with cost. While the correlation analysis does suggest a relationship, the strength and direction of that relationship are inconclusive.

Cost data reported by survey respondents had a high degree of variance, creating a high standard error of the estimate and a very low level of confidence. Examples of the correlation can be seen in Appendix D.

While the correlation analysis ran into several difficulties, the data was analyzed for descriptive statistics.

### **Administrative Structures**

Survey results indicate that 60% of states have centralized fleets (11/20). Of those states reporting, 83.33% have a separate fleet operated by their transportation department; 50% have a separate fleet operated by their conservation departments, and 50% have a separate fleet operated by their natural resources department. In addition, 75% of states have distinct highway patrol fleets and 66.67% have individual fleets for their state universities.

The administrative structures of centralized fleets vary, based on who is served by the fleet. However, the centralized fleets are structured more bureaucratically since they have a designated fleet manager with support staff. Nine of the 11 centralized states had fleet managers, while only 2 of the 9 non-centralized states had fleet managers.

Payment to the centralized fleet is through a leasing or rental agreement, although the terms used vary among the states. All 11 centralized states have structures that the centralized service bills on a regular basis for each vehicle. In most cases, a monthly set fee is charged by type of vehicle, such as \$140 per month for a mid-sized vehicle. Several states noted that this charge covers depreciation costs. Additionally, states charge a per use charge (either in miles or time). This charge is billed to cover the cost of fuel, maintenance, and other disposable items, such as \$0.23 per mile. At the end of the period, the central agency bills the using agency for both costs (\$140 for vehicle + \$0.23 per mile driven).

### **Fleet Size and Characteristics**

The condition of vehicles in the fleets responding show that 40% of the vehicles are thought to be in excellent condition, 40% of vehicles are thought to be in good condition, and the remaining 20% of vehicles are thought to be in poor condition.

Forty percent of the fleets are centrally located near the state capitol and 40-60% are located in urban areas.

The reporting fleets as a whole are comprised of domestic brand vehicles; only three fleets reported owning foreign made vehicles. A percentage breakdown of domestic vehicles indicates that 22.69% of the fleet vehicles are made by Chrysler, 43.56% by Ford, and 33.73% by General Motors. Table 2 shows that most 27 fleets claim to have

<b>Table 2.</b>			
<b>VEHICLE MAKE</b>			
<b>% of Vehicles</b>	<b>Chrysler</b>	<b>Ford</b>	<b>GM</b>
0 - 19%	27	5	12
20 - 39%	23	21	26
40 - 59%	6	20	14
60 - 79%	1	8	5
80 - 100%	0	3	0
<i>n</i> =	57	57	57

less than 20% of their fleet made by Chrysler, while 11 fleets state that they have between 60 - 100% of their vehicles manufactured by Ford. Centralized fleets report a slightly different makeup of vehicles with 22.80% being from Chrysler, 38.59% being from Ford, and 38.59% being from General Motors. The difference in fleet makeup can possibly be explained by policies addressing fuel consumption. Missouri, for example, has a state law that addresses the use of alternative fuels such as ethanol and propane gas. At the present time, Ford is the predominant supplier of alternative fuel passenger vehicles. Table 3 shows the actual breakdown of vehicle totals by vehicle type for motor pools and assigned vehicles.

**Table 3.**

**VEHICLE TOTALS**

	<b>Motor Pool</b>			<b>Assigned</b>			<b>Total</b>		
	Mean Per State	Mean Per Fleet	Total	Mean Per State	Mean Per Fleet	Total	Mean Per State	Mean Per Fleet	Total
Sub Compact	37	37	97	88	37	1,752	116	44	2,328
Compact	37	15	743	243	103	4,854	278	105	5,557
Mid-Sized	97	40	1,932	288	118	5,761	379	143	7,578
Full-Sized	86	36	1,717	166	68	3,319	252	95	5,036
Mini-Van	50	21	1,005	61	25	1,227	111	42	2,229
Full-Sized Van	31	13	629	113	47	2,258	144	54	2,887
Cargo Van	9	4	170	28	12	564	37	14	734
Pickup <4500	13	5	259	58	24	1,150	70	27	1,409
Lt Truck 2WD	30	13	606	356	145	7,111	386	46	7,717
Lt Truck 4WD	22	9	438	112	47	2,246	134	51	2,684
Caravans	33	14	650	28	11	551	31	12	612
Sport Utility	107	179	2,136	67	28	1,331	99	37	1,981
<b>Total</b>	552	386	10,382	1,608	665	32,124	2,037	624	40,752



## **Policies, Rules, and Practices**

Survey results show the majority of fleets have policies in place to control fleet usage and assignment, commuting, passengers, and fuel usage. Researchers feel that having written policies or rules to define and control legitimate use of fleet vehicles can greatly improve fleet efficiency. Such policies or rules were found to exist in 89.8% of fleets responding to the survey. Policies or rules addressing commuting from home to work exist in 83.10% of the responding fleets, however, only 49.20% of the responding fleet report having policies or rules to address commuting distance. Less than two-thirds of the responding fleets (61%) report having policies pertaining to reporting miles driven for employee commuting to the Internal Revenue Service.

Seventy-eight percent of the reporting fleets report having policies to address carrying passengers in fleet owned vehicles, while 60% of fleets report having policies to address which fuel types are used in fleet vehicles. Policies dealing with vehicle assignment and monitoring were found in 64.40% of fleets. Based on these findings, it appears that fleets are making an effort to use policies, rules, and procedures to help control fleet costs to some degree in most states. Researchers feel that one of the biggest keys to realizing optimal results from any type of policy or rule lies in monitoring compliance.

## **Fleet Costs**

The practice of analyzing fleet costs is poor among state vehicle fleets. Few fleets conduct life-cycle cost analyses (39.70%), and only a handful include the cost of management, administration, maintenance, repair, facilities, salaries, and fuel in their total operational costs (39.65%). Fleets do, however, keep cumulative repair costs on their vehicles (86.20% of fleets).

The lack of cost-accounting is not surprising, given the range of cost per mile for different vehicle types. While the mean cost per mile for vehicles may be fair, the variation on these costs creates some concern. As seen in Table 4, the cost range can be as much as 1000%, as in sport utility vehicles being operated within a range of \$0.06 per mile to \$0.60 per mile. The average cost per mile could be used as a benchmark, yet may be negatively skewed.

<b><u>Table 4.</u></b>		
<b>VEHICLE COST PER MILE</b>		
<b><u>Type</u></b>	<b><u>Cost/Mile</u></b>	<b><u>Range</u></b>
Sub-Compact	15¢	11¢ – 17¢
Compact	16¢	5¢ – 22¢
Mid-Sized	19¢	3¢ – 39¢
Full-Sized	19¢	5¢ – 50¢
Mini-Van	23¢	5¢ – 76¢
Full-Sized Van	32¢	7¢ – 71¢
Cargo Van	30¢	7¢ - \$1.00
Pick-up	22¢	6¢ – 48¢
Light Truck 2wd	25¢	6¢ – 55¢
Light Truck 4wd	29¢	4¢ – 67¢
Caravans	23¢	8¢ – 50¢
Sport Utility	28¢	6¢ - 60¢

While the cost figures and methods need additional work on the part of fleets, 79.13% of fleets agree that their costs have risen over the past three years. Only 21.30% felt that consolidation could reduce costs, yet 73.21% felt that proper fleet management could reduce the cost significantly.

### **Fleet Utilization**

Fleet utilization varies across states, fleets, and vehicle types. Likewise, variations take place between assigned vehicles and motor pool vehicles. In general, all vehicles are driven 14,159 miles per year. Fleets report that the vehicles are used 69.89% of their available time, meaning that vehicles are checked out to individuals.

Motor pool utilization has a typical ratio of 8.17 employees to 1 vehicle, while the ration of employees to assigned vehicles is unknown. In tracking utilization, 58.93% track the motor pool, while only 54.55% track assigned vehicles. The motor pool is checked out on both a daily and a trip basis, 67.86% and 78.57% of fleets respectively. However, only about 68% keep trip tickets or have user logs for tracking.

### **Purchasing and Disposal of Vehicles**

As noted earlier, state fleets have considerable resources tied up in vehicles. In fact, survey respondents indicated that at least \$1,083,057,059 was invested in vehicles. While the vehicles are predominately purchased through statewide contracts (98.28%), there seems to be little negotiation on vehicle prices. Only 43.10% of fleets stated that they negotiated with either the manufacturer or the dealer. In many cases, like the State of Missouri, the contracting and purchasing function is handled not by the fleet manager, but rather a separate entity such as state purchasing.

The average price for a vehicle depends upon the type of vehicle. However, means, weighted means, and ranges are provided in Table 5.

**Table 5.****VEHICLE PURCHASE PRICE**

<b>Vehicle Type</b>	<b>Mean Purchase Price</b>	<b>Weighted Mean Purchase Price</b>	<b>Lowest Purchase Price (State)</b>	<b>Highest Purchase Price (State)</b>
Sub-Compact	\$11,517.01	NA	\$8,900.00 (VT)	\$14,000.00 (MS)
Compact	\$11,561.26	NA	\$7,386.00 (MO)	\$14,100.00 (MS)
Mid-Sized	\$14,216.57	\$14,601.49	\$9,700.00 (MS)	\$19,000.00 (MS)
Full-Sized	\$17,073.20	\$17,069.62	\$9,883.00 (MO)	\$21,100.00 (CT)
Mini-Van	\$15,961.50	\$16,062.39	\$11,000.00 (ME)	\$22,800.00 (MT)
Full-Sized	\$18,612.97	\$18,162.59	\$11,700.00 (MS)	\$24,564.00 (TX)
Cargo Van	\$15,699.39	\$14,975.47	\$10,000.00 (MS)	\$24,564.00 (TX)
Pickup <4500 GVW	\$13,382.35	\$12,281.92	\$8,500.00 (MS)	\$21,000.00 (MS)
Light Truck 2WD <8600 GVW	\$15,039.21	\$15,011.81	\$9,800.00 (MS)	\$21,000.00 (MT)
Light Truck 4WD <8600 GVW	\$18,247.04	\$18,250.26	\$11,000.00 (MD)	\$24,000.00 (MS)
Caryalls	\$24,029.07	\$24,612.54	\$11,718.00 (MS)	\$32,985.00 (MO)
Sport Utility	\$19,969.01	\$18,722.06	\$11,792.00 (MS)	\$27,000.00 (SD)

In selecting the most cost-efficient vehicles, fleets use a variety of selection criteria. Over 48% of fleets stated that vehicles were chosen on life-cycle cost; 43% stated that vehicles were allowed only certain options. Almost no fleets lease vehicles on a regular basis.

Disposal of vehicles follows a similar pattern, in that 93.22% of fleets use various criteria to determine when to remove a vehicle from the fleet. Most fleets use a combination of the total mileage and years in service. The average disposal mileage for fleet vehicles is 109,312.50, or 6.67 years in service. When disposing of vehicles, 79.66% of fleets agree that public auctions are used most frequently. Roughly 50% of fleets surplus their vehicles, while 13.56% dispose of their vehicles through direct sales to auction houses or used vehicle distributors. As a whole, 88.14% of fleets believe they are getting a “fair market value” for their vehicles.

**Maintenance Services**

While only 40.93% of fleets had a centralized repair facility, survey respondents indicated that roughly 50% of maintenance was completed internally and 50% completed externally. What was outsourced varied among fleets, yet most fleets agreed that simple maintenance was completed in-house. More complex maintenance, such as alignments, is outsourced, see Table 6.

**Table 6.**

**MAINTENANCE PROVIDERS AND SERVICE**

	<i>Oil Changes</i>	<i>Tire Rotations</i>	<i>2 Wheel Alignments</i>	<i>4 Wheel Alignments</i>
Internal	22 (37%)	18 (30%)	8 (14%)	8 (14%)
Internal & External	24 (41%)	23 (40%)	18 (31%)	17 (29%)
External	13 (22%)	18 (30%)	33 (56%)	34 (58%)
<i>n=</i>	59	59	59	59

One reason fleets outsource a great deal of their maintenance work is due to warranty guidelines. In fact, 93.10% of warranty work is sent to the private sector. Fleets suggested that in order to qualify their in-house work for warranty, the garage would have to meet rigorous standards. Since many fleets could not do this, fleets outsource to the manufacturer's dealer.

Whether work is completed internally or externally, fleets reported that they document repairs (93.10%) and preventative maintenance (87.90%). Only 75.86% of fleets stated that they had written policies regarding maintenance and repairs.

**Fleet Management Methods and Systems**

According to the survey, not all fleets have comprehensive fleet management systems (FMS) or methodologies. With 59 fleets reporting in this area, only 17 (28.81%) had specifically designated fleet management systems and administration expenditures.

Eight fleets had externally developed systems, which seemed to collect better data than the nine internally developed systems. In general, those fleets with the external (private vendor) fleet systems provided precise numbers, as opposed to estimated numbers. For example, the North Dakota Department of Transportation (utilizing the Prototype FMS) reported having 202 compact vehicles, driving an average of 15,175 miles per year at \$0.21 per mile. On the other hand, the State of Virginia (utilizing an in-house system) reported having 150 compact vehicles operating at \$0.05 per mile, yet no annual mileage was reported. Both the external and in-house FMS provided more complete data than fleets without any system.

On the side of expenditures for fleet administration, the mean fleet administrative expenditures were calculated at \$103,608.87 per year. This figure was positively skewed in that large fleets spent millions of dollars each year for administrative purposes. However, based on the number of vehicles within each fleet, an average cost for administration was calculated at \$41.68 per vehicle.

## Conclusion

The practice of fleet management can be an effective means for controlling fleet costs. In fact, many fleets (public and private) have found that proper management can have a significant impact on the fleet's overall operations.

With so many different techniques and methods available, fleets must determine where to begin. Based on the literature and study, fleets should begin by first setting a foundation for proper fleet management. This includes adopting the right philosophy, developing a comprehensive accounting methodology, and implementing a method for collecting, storing, and analyzing data. Next, fleets should use collected data to make improvements in the areas of utilization, policies, maintenance, purchasing, and administration.

In summary, fleets should consider taking the following steps:

**Adopt the philosophy of continuous improvement.** While one-time improvements are important, agencies should find ways to continuously improve their fleets. By doing so, agencies will not only reduce costs, they will provide better service to customers.

**Develop a comprehensive cost-accounting method.** Without knowing the actual, full cost of operations, agencies cannot conduct proper analyses and operational reviews. By fully accounting for all costs (fuel, maintenance, personnel, administration, vehicle purchase price, depreciation, insurance, etc.), agencies can determine their actual cost per mile, conduct reviews, and develop improvements. This methodology should include life-cycle costing, which incorporates all costs incurred during the vehicle's life.

**Implement a comprehensive, computerized, fleet management system.** In order to "manage" the fleet, employees must keep and analyze a wide variety of information related to each individual vehicle, including mileage, fuel consumption, utilization, repair and maintenance history, and other descriptive data. By using a computerized program specifically designed for fleet management, agencies can more effectively collect and handle this data. Furthermore, most fleet management programs automatically conduct appropriate analyses on the fleet.

**Conduct utilization reviews at least once per year.** Controlling fleet size is one of the most effective means for managing fleet efficiency. However, in order to determine the appropriate size, agencies must understand the number of miles driven each year, the number of trips taken, the number of people traveling, and other parameters related to utilization.

**Implement policies that focus on assignment and utilization, and monitor compliance with those policies.** Agencies should consider which employees have vehicles, and which employees need vehicles. Often, these two do not match one another, in that some employees may have vehicles as a "perk", yet

not need a vehicle for travel. By looking at resources and needs, fleets can possible restructure vehicle assignments and reduce the need for additional vehicles.

**Develop and adhere to preventative maintenance schedules.** Many agencies have found that preventative maintenance programs can save on maintenance and repair costs in the long run. By ensuring that vehicles are maintained properly, agencies can avoid major repair costs. Likewise, agencies can save costs by ensuring the preventative maintenance steps are beneficial, necessary, and appropriate (e.g. oil changes at 7,000 miles versus 3,000).

**Coordinate or consolidate the administration of small fleets.** This study and various management reviews suggest that fleets with more complex, hierarchical administrations are better managed. Since the size of the fleet often dictates its administrative structure, it may make sense to join small fleets into one larger organization. Individually, small fleets may not be able to conduct proper fleet management due to overhead costs, yet, collectively, they are more capable of doing so.

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# Appendix A

*Survey Recipients*





Title	First Name	Last Name	JobTitle	Company	Address1	Address2	City	State	Postal Code	Work Phone
Mr.	Curtis	Hayes	Director	Office of Fleet Management	Department of Finance	886 S. Ripley	Montgomery	AL	36130-2851	334-242-4043
Mr.	David	St. John	Assistant Director	Division of General Services	Department of Administration	1700 W. Washington, Room 600	Phoenix	AZ	602-542-1593	
Mr.	Ron	Lester	Information Systems Manager	Office of Administrative Services	Department of Finance & Administration	PO Box 2485	Little Rock	AR	72203	501-324-9058
Mr.	Timothy	Bow	Chief	Office of Fleet Administration	Department of General Services	802 Q Street	Sacramento	CA	95814-6422	916-327-2007
Mr.	Jack	Keene	Director	Division of Central Services	Department of Personnel	225 E. 16th Ave., Room 800	Denver	CO	80203	303-866-3970
Mr.	Stephen	Dygus	Director	Office of Fleet Operations	Department of Administrative Services	190 Huyshope Ave.	Hartford	CT	06106	203-566-5940
Mr.	Terry	Barton	Fleet Administrator	Department of Administrative Services	Tudor Industrial Park	604 Otis Drive	Dover	DE	19901	302-739-3039
Mr.	Harrison	Rivers	Fleet Manager	Division of Motor Pool	Department of Management Services	3266 Capitol Circle, SW	Tallahassee	FL	32310	
Mr.	Mike	Merget		Motor Pool	204 Butler Street		Atlanta	GA	30334	404-656-5514
Mr.	Harold	Sonomura	Division Head	Automotive Management Division	Accounting and General Services	869-A Punchbowl St.	Honolulu	HI	96813	808-586-0343
Ms.	Pamela	Ahrens	Director	Department of Administration	650 W. State Street, Room 100		Boise	ID	83720	208-334-3382
Ms.	Barbara	Bonansinga	Manager	Division of Vehicles	Department of Central Management Services	200 E. Ash Street	Springfield	IL	62706	217-782-2535
Mr.	Brian	Renner	Superintendent	State Motor Pool	425 W. New York Street		Indianapolis	IN	46204	317-232-1378
Mr.	Dale	Schroeder	State Vehicle Dispatcher	Vehicle Dispatcher Division	Department of General Services	301 E. 7th Street	Des Moines	IA	50319	515-281-7702
Mr.	Orion	Jordon	Director	Central Motor Pool	Department of Administration	400 SW Van Buren	Topeka	KS	66603-3332	913-296-2245
Mr.	Joe	Heady	Director	Division of Transportation Services	Transportation Cabinet	369 Warsaw Street	Frankfort	KY	40622	502-564-2260
Mr.	Louis	Amedee	Director	Property Assistance Agency	Division of Administration	PO Box 94095	Baton Rouge	LA	70804-9095	504-342-6890
Mr.	Ron	Duncan	Fleet Manager	Vehicle Rental Agency	Central Fleet Management	9 State House Station	Augusta	ME	04333	207-287-3521
Mr.	Walter	Wieczorek	Fleet Manager	Motor Transport	26 State House Station		Augusta	ME	04333	207-287-2677
Mr.	Mike	Ledger	Fleet Manager	State Police	42 State House Station	36 Hospital Street	Augusta	ME	04333	207-287-8235
Mr.	John	Keavey	Fleet Administrator	Division of Management Analysis & Audits	Department of Budget & Fiscal Planning	45 Calvert Street	Annapolis	MD	21401	410-974-2310
Mr.	John	Ewing	Fleet Administrator	Motor Vehicle Management Bureau	Executive Office of Administration and Finance	1 Ashburton Place, Room 105	Boston	MA	02108	617-727-8844
Mr.	Duane	Berger	Director	Morot Transport Division	PO Box 30026		Lansing	MI	48909	517-322-5001
Mr.	Mike	Higgins	Director	Travel Management	Department of	610 N. Robert	St. Paul	MN	55101	612-296-6781

Title	First Name	Last Name	Job Title	Company	Address1	Address2	City	State	Postal Code	Work Phone
Mr.	Tim	Morse	Fleet Manager	Division Bureau of Field Services	Administration Department of Natural Resources	500 Lafayette Road	St. Paul	MN	55155-4016	612-297-1402
Mr.	Don	Buffum	Director	Bureau of Purchasing	Office of Purchasing and Travel	1504 Sillers Building	Jackson	MS	39201	601-359-3409
Mr.	Stan	Perovich	Director	Division of General Services	Office of Administration	Truman Building, Room 760	Jefferson City	MO	65102	573-751-4656
Mr.	John	Blacker	Administrator	Maintenance Division	Department of Transportation	2701 Prospect Avenue	Helena	MT	59620	406-444-6158
Mr.	Allan	Abbott	Director	Department of Roads	PO Box 94759		Lincoln	NE	68509-4759	402-479-4615
Mr.	George	Krumenacker	Fleet Manager	Central Motor Pool	605 S. Broad Street		Trenton	NJ	08625	609-984-7277
Lt.	Pete	Hinkle	Vehicle Coordinator	State Police	Transportation Unit	PO Box 7068	Trenton	NJ	08625	609-882-2000
Mr.	Steven	Toth	Chief of Equipment	Department of Transportation	999 Parkway Ave.		Trenton	NJ	08625	609-530-2204
Mr.	Jim	Russell	Director	Transporation Motor Pool	Department of General Services	2600 Cerillos Road	Santa Fe	NM	87502-6110	505-827-1950
Mr.	Peter	Delaney	Commissioner	Office of General Services	Corning Tower Building, 41st Floor	Empire State Plaza	Albany	NY	12242	518-474-5991
Mr.	John	Massey	Director	Division of Motor Fleet Management	Department of Administration	1915 Blue Ridge Road	Raleigh	NC	27607-6403	919-733-6540
Mr.	Paul	Feyereisen	Manager	State Fleet Services	Department of Transportation	608 E. Boulevard Ave.	Bismarck	ND	58505	701-328-2545
	Leilani	Napier	Fleet Administrator	Division of Administrative Services	4200 Surface Road		Columbus	OH	43228-1313	614-466-6607
Mr.	Steve	Dwyer	Director	Division of Fleet Management	Department of Central Services	3301-A N. Santa Fe	Oklahoma City	OK	73118	405-521-2204
Mr.	Rob	Cameron	Motor Fleet Manager	Fleet Administration	Department of Administrative Services	1100 Airport Road, SE	Salem	OR	97310	503-378-3367
Mr.	Ronald	Thrope	Acting Manager	Fleet Management	2221 Forester Street		Harrisburg	PA	17105	717-787-3162
Mr.	Robert	Carl	Director	Department of Administration	1 Capitol Hill		Providence	RI	02903	401-277-2280
Mr.	Gerald	Calk		Budget & Control Board	State Fleet Management	1022 Senate Street	Columbia	SC	29201	803-737-1502
Mr.	Gary	Russell	Director	Fleet and Travel Management	Bureau of Administration	500 E. Capitol Ave.	Pierre	SD	57502	605-773-3162
Mr.	Dennis	Johnson	Director	Division of Motor Vehicle Management	Department of General Services	910 8th Ave., N	Nashville	TN	37219	615-741-1637
Mr.	James	Green	Manager	Administrative Services	General Services Commission	Capitol Station	Austin	TX	78711-3047	512-463-3035
Mr.	Steven	Saltzinger	Manager	Motor Pool	Division of General Services	1380 W. North Temple	Salt Lake City	UT	84114	801-521-2701
Mr.	George	Combes	Superintendent	Central Garage Division	Agency of Transportation	133 State Street	Montpelier	VT	05633	802-828-2564
Mr.	William	Colavita	State Fleet Manager	Department of Transportation	1401 E. Broad Street		Richmond	VA	23219	804-367-6886

<b>Title</b>	<b>First Name</b>	<b>Last Name</b>	<b>JobTitle</b>	<b>Company</b>	<b>Address1</b>	<b>Address2</b>	<b>City</b>	<b>State</b>	<b>Postal Code</b>	<b>Work Phone</b>
Mr.	Michael	Levenson	Assistant Director	Division of Transportation Services	Department of General Administration	PO Box 41032	Auburn	WA	98604-1032	360-438-8247
Mr.	Ron	Dukate	Coordinator of Travel and Fleet Management	Travel Management Office	Department of Administration	212 California Ave.	Charleston	WV	25305	304-558-3259
Mr.	Jeff	Knight	Bureau of Transportation	Department of Administration	201 S. Dickerson		Madison	WI	52703	608-266-9855
Mr.	Bernie	Kerschner	Vehicle Fleet Supervisor	Central Services	723 W. 19th Street		Cheyenne	WY	82002	307-777-6857
Mr.	Doug	Gracey		Dept. of Mental Health	1706 E. Elm		Jefferson City	MO	65102	
Mr.	John	Giles		Dept. of Social Services	Broadway Building, Room 520		Jefferson City	MO	65102	
Mr.	Stan	Perovich		Office of Administration	Truman Building, Room 760		Jefferson City	MO	65102	
Mr.	Mike	Backer		Department of Revenue	Truman Building, Room 219		Jefferson City	MO	65102	
Mr.	Jim	Gerling		Dept. of Transportation	Capitol Ave at Jefferson Street		Jefferson City	MO	65102	
Mr.	Doug	Stephen		Dept. of Labor and Industrial Relations	Employment Security Building		Jefferson City	MO	65102	
Mr.	Jerry	Goff		Dept. of Conservation	PO Box 180		Jefferson City	MO	65102	
Ms.	Karen	Tschappler		Dept. of Health	920 Wildwood		Jefferson City	MO	65102	
Ms.	Cheryl	Avant		Dept. of Agriculture	1616 Missouri Blvd.		Jefferson City	MO	65102	
Ms.	Rhonda	Irey		Dept. of Public Safety	Truman Building, Room 870		Jefferson City	MO	65102	
Mr.	Rick	Petty		Missouri Lottery	1823 Southridge Drive		Jefferson City	MO	65102	
Ms.	Shirley	Gerling		Dept. of Insurance	Truman Building, Room 630		Jefferson City	MO	65102	
Mr.	Larry	Rains		Missouri Highway Patrol	1510 E. Elm Street		Jefferson City	MO	65101	
Mr.	Bryan	Goeke		Dept. of Corrections	Fulton Reception and Diagnostic Center	PO Box 190	Fulton	MO	65251	
Mr.	Stan	Perkins		Dept. of Natural Resources	General Services	Jefferson Building, Room 135	Jefferson City	MO	65101	



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# Appendix B

*Letter Introducing Survey*







November 20, 1997

«Title» «FirstName» «LastName»  
«JobTitle»  
«Company»  
«Address1»  
«Address2»  
«City», «State» «PostalCode»

Dear «FirstName»:

During the past year, the State of Missouri has been studying fleet management practices to improve its own operations. Through its study, Missouri found no comprehensive study of government fleets on which to benchmark. To establish this benchmark, the Missouri Council on Efficient Operations is working with students from the University of Missouri, College of Business and Public Administration to survey state governments and analyze their fleet operations.

To complete the study, we ask that each state complete the survey and return it no later than December 16, 1997. The purpose of the survey is to collect state governments' fleet data in a consistent fashion. Information gathered will be analyzed to determine the:

- characteristics of state fleets;
- cost/benefit of fleet management practices, procedures, and methods; and
- utilization rates of state vehicles.

This survey is being sent to all 50 states, and several territories. The survey is intended to be completed by either the state's fleet manager (*if the fleet is consolidated*) or each agency's fleet manager (*if the fleet is not consolidated*). The names of survey recipients was taken from the Council of State Government's fleet administration list, thus, you are asked to pass the survey on to the appropriate individual(s), if you are not one of the individuals listed above or if there are multiple fleets within your state.

Your participation and cooperation is vital, since it will help develop a benchmark for those interested in fleet management. The information and analysis will help readers identify potential improvement areas and solutions.

At your earliest convenience, please complete the survey to the best of your ability. If you cannot easily answer all the questions, please complete those you can. The survey team understands that many of the questions involve computations. Thus, please provide information where possible, or offer your "best guess."

The survey team will begin analyzing the data as soon as surveys are returned. The team will compile data and provide you with information no later than January 16, 1998. Completed surveys should be mailed to:

Council on Efficient Operations  
Office of the Lt. Governor  
State Capitol, Room 121  
Jefferson City, MO 65101

Again, thank you for your time and assistance. If you have any questions, please contact me at (573) 751-0382, ext. 26. You can also e-mail me at [mbenton@mail.state.mo.us](mailto:mbenton@mail.state.mo.us).

Sincerely,

Matthew S. Benton, Director  
Council on Efficient Operations



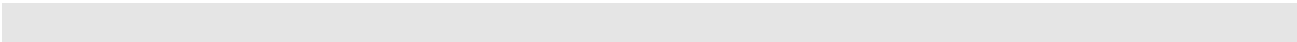


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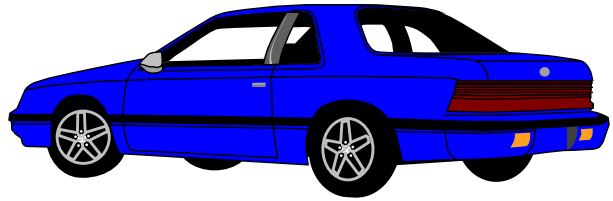
# Appendix C

*1997 State Government Vehicle Survey*





# STATE GOVERNMENT VEHICLE SURVEY



Survey conducted by:  
The Missouri Council  
on Efficient Operations

**Due: December 16,  
1997**

**Questions and completed surveys  
should be directed to:**

Matt Benton  
Council on Efficient Operations  
State of Missouri  
State Capitol, Room 121  
Jefferson City, MO 65101  
(573) 751-0382 ext. 26  
[mbenton@mail.state.mo.us](mailto:mbenton@mail.state.mo.us)

# State Government Vehicle Survey

## *Introduction*

### **What is the purpose of this survey?**

The purpose of this survey is to collect both qualitative and quantitative data on state government vehicle fleets. It is the intention of the survey to collect information on all aspects of fleets and their management.

### **How will this information be used?**

Information collected through the survey is being used for academic and professional purposes. The data collected is not being used to audit states. Information collected will be analyzed and compared across states to glean a generalized picture of how state government's operate and manage their vehicles. This analysis will allow states to benchmark their practices against others, thus helping states to improve their fleet management practices.

### **How is the survey organized?**

The survey is organized in a logical fashion, grouping like questions into categories. There may be some overlap in questions, due to the necessary differentiation between categories. The categories of questions are as follows:

- |          |   |
|----------|---|
| Part 1:  | General Information                               |
| Part 2:  | Administrative Structures                         |
| Part 3:  | Fleet Size and Characteristics                    |
| Part 4:  | Policies, Rules, and Practices                    |
| Part 5:  | Fleet Costs                                       |
| Part 6:  | Fleet Utilization                                 |
| Part 7:  | Purchasing and Disposal of Vehicles               |
| Part 8:  | Maintenance Services                              |
| Part 9:  | Fleet Management Methods and Systems              |
| Part 10: | Interagency Cooperation and Legislative Relations |

### **Who is to complete the survey?**

The survey is to be completed by each fleet's manager or director. Within each state, there may be multiple fleets, thus other fleet managers in your state may have received the survey. **Please answer only for those vehicles which are under the direct control of the fleet manager, and not for other state fleets.** In Missouri for example, the Office of Administration operates a statewide fleet, yet the Department of Transportation and the Department of Social Services also have fleets. Each one has received a copy of this survey and each will return a completed copy.



# State Government Vehicle Survey

## *Part 1: General Information*

**Instructions:** Please fill in the blanks with the appropriate information.

Name: \_\_\_\_\_

Department/Division: \_\_\_\_\_

Job Title: \_\_\_\_\_

State: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Internet Homepage: \_\_\_\_\_

## *Part 2: Administrative Structures*

**Instructions:** For questions 1-6, check the box (yes or no) that best answers the question. For questions 7-9, please use the space provided to write your answer.

	Yes	No
1. Does the state have a centralized vehicle fleet?	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the state's Department of Transportation, or its equivalent, have its own fleet?	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the state's Department of Conservation, or its equivalent, have its own fleet?	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the state's Department of Natural Resources (parks), or its equivalent, have its own fleet?	<input type="checkbox"/>	<input type="checkbox"/>

- |  | Yes                      | No                       |
|--|--------------------------|--------------------------|
| 5. Does the state's highway patrol have its own fleet?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Do colleges and universities have their own fleets?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Describe the fleet's administrative structure in terms of its operation and relationship to other fleets. |                          |                          |
| 8. If the state has a centralized fleet, list the agencies which use vehicles from the centralized fleet?    |                          |                          |
| 9. If the state has a centralized fleet, describe how agencies pay for the use of the vehicles.              |                          |                          |

## ***Part 3: Fleet Size and Characteristics***

**Instructions:** For questions 1-13, answer in percentages by checking the box that best describes the fleet. For questions 14-16, please fill in the blanks with the appropriate number.

	<b>0 - 19%</b>	<b>20 - 39%</b>	<b>40 - 59%</b>	<b>60 - 79%</b>	<b>80 - 100%</b>
1. The following percentage of the fleet's vehicles are in <b>excellent</b> condition:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The following percentage of the fleet's vehicles are in <b>good</b> condition:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The following percentage of the fleet's vehicles are in <b>poor</b> condition:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The following percentage of the fleet's vehicles are <b>centrally located</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The following percentage of the fleet's vehicles are in <b>urban areas</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The following percentage of the fleet's vehicles are <b>leased</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The following percentage of the fleet's vehicles are <b>made in the United States</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The following percentage of the fleet's vehicles are <b>manufactured by Chrysler</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The following percentage of the fleet's vehicles are <b>manufactured by Ford</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The following percentage of the fleet's vehicles are <b>manufactured by General Motors</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. The following percentage of the fleet's vehicles are <b>manufactured by Toyota</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The following percentage of the fleet's vehicles are <b>manufactured by Nissan</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. The following percentage of the fleet's vehicles are <b>manufactured by Subaru</b> :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. What is the average purchase price of the state's vehicles?

a. # sub-compact	\$
b. # compact	\$
c. # mid-sized	\$
d. # full-sized	\$
e. # mini-van	\$
f. # full-sized van	\$
g. # cargo van	\$
h. # pick-up <4500 GVW	\$
i. # light truck - 2WD <8600 GVW	\$
j. # light truck - 4WD <8600 GVW	\$
k. # carryalls	\$
l. # sport utility	\$

15. How many vehicles are in the state agency's:

- a) # sub-compact
- b) # compact
- c) # mid-sized
- d) # full-sized
- e) # mini-van
- f) # full-sized van
- g) # cargo van
- h) # pick-up <4500 GVW
- i) # light truck - 2WD <8600 GVW
- j) # light truck - 4WD <8600 GVW
- k) # carryalls
- l) # sport utility

Total

Motor Pool	Assigned Vehicle	Other	Total State Vehicles

16. What is the average annual mileage for the state's fleet:

- a) # sub-compact
- b) # compact
- c) # mid-sized
- d) # full-sized
- e) # mini-van
- f) # full-sized van
- g) # cargo van
- h) # pick-up <4500 GVW
- i) # light truck - 2WD <8600 GVW
- j) # light truck - 4WD <8600 GVW
- k) # carryalls
- l) # sport utility

Weighted Avg.

Motor Pool	Assigned Vehicle	Other	Total State Vehicles

## ***Part 4: Policies, Rules, and Practices***

**Instructions:** For questions 1-5, please check the box (yes or no) that best answers the question. For question 6, please answer by filling in the blank.

	Yes	No
1. Does the fleet have a policy to control employees who commute to and from work with a state vehicle?	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the fleet have written policies governing vehicle maintenance?	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the fleet have policies regarding the following use and assignment issues:		
a. A definition of legitimate use?	<input type="checkbox"/>	<input type="checkbox"/>
b. A description of any records to be maintained for each vehicle?	<input type="checkbox"/>	<input type="checkbox"/>
c. Monitoring the continued need for any permanent vehicle assignments?	<input type="checkbox"/>	<input type="checkbox"/>
d. Which positions or programs may have vehicles permanently assigned to them?	<input type="checkbox"/>	<input type="checkbox"/>
e. Authorization for commuting, including limits placed on commuting distance?	<input type="checkbox"/>	<input type="checkbox"/>
f. When applicable, any IRS tax or individual reimbursement liabilities placed on the driver?	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the fleet have a policy regarding passengers in fleet vehicles, (eg, fleet vehicles cannot transport non-state employees)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Does the fleet have a policy on which type of fuel to purchase (ie, no high-octane purchases, or blended fuel preference)?	<input type="checkbox"/>	<input type="checkbox"/>
6. List any other policies the fleet may have regarding the assignment and use of vehicles.		
7. How does the fleet ensure that policies are followed (eg state statutes, mandates, executive order)?		

## ***Part 5: Fleet Costs***

**Instructions:** For questions 1-8, answer by checking the box that best describes the fleet. For questions 9-13, please fill in the blanks with the appropriate number.

	<b>Disagree</b>	<b>Somewhat Disagree</b>	<b>NA</b>	<b>Somewhat Agree</b>	<b>Agree</b>
1. The fleet tracks each vehicle's cumulative repair cost.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The fleet has written policies governing vehicle maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The fleet conducts a life-cycle cost analysis on a regular basis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The fleet includes the cost of management supervision, the cost of facilities, and salaries in the per mile cost.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The fleet's costs have risen due to inflation and the rising cost of new vehicles within the last 3 years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The fleet's costs have dropped over the last few years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Fleet consolidation <b>has</b> helped the fleet reduce its costs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Proper fleet management <b>has</b> helped the fleet reduce its costs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. What is the fleet's total estimated value?	\$ _____				
10. What is the average cumulative repair cost for vehicles?	\$ _____				
11. How much did the fleet spend on administration within the last year?	\$ _____				

12. What is the fleet's average cost per mile for the following vehicle types?

a. # sub-compact	\$
b. # compact	\$
c. # mid-sized	\$
d. # full-sized	\$
e. # mini-van	\$
f. # full-sized van	\$
g. # cargo van	\$
h. # pick-up <4500 GVW	\$
i. # light truck - 2WD <8600 GVW	\$
j. # light truck - 4WD <8600 GVW	\$
k. # carryalls	\$
l. # sport utility	\$

13. Describe any actions the fleet has taken to significantly reduce its overall costs.



## *Part 5: Fleet Utilization*

**Instructions:** For questions 1-6, please check the box (yes or no) that best answers the question. For questions 7-10, please fill in the blanks with the appropriate answer.

	Yes	No
1. Does the fleet track and monitor vehicle utilization rates for the motor pool?	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the fleet track and monitor vehicle utilization rates for assigned vehicles?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are motor pool vehicles checked out on a daily basis?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are motor pool vehicles checked out on a trip basis?	<input type="checkbox"/>	<input type="checkbox"/>
5. Does the fleet require motor pool vehicle users to complete a trip ticket?	<input type="checkbox"/>	<input type="checkbox"/>
6. Does the fleet keep a log of motor pool vehicles, requiring users to sign in and out?	<input type="checkbox"/>	<input type="checkbox"/>
7. Per vehicle, what is the fleet's average utilization rate? (eg 15,000 miles per year, 75% of available time.)	<hr/>	
8. How many employees have access to the motor pool?	<hr/>	
9. What is the fleet's total estimated value?	<hr/> \$	
10. Describe what kind of needs analysis the fleet completes to determine the need for numbers and types of vehicles?		

## *Part 7: Purchasing and Disposal of Vehicles*

**Instructions:** For questions 1-15, answer by checking the box that best describes the fleet. For questions 16-18, please fill in the blanks with the appropriate number.

	Disagree	Somewhat Disagree	NA	Somewhat Agree	Agree
1. The fleet purchases vehicles through statewide contracts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The state negotiates vehicle purchases with vehicle manufacturers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Vehicles are chosen based on their anticipated life-cycle cost.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The fleet requires that vehicles be purchased without certain features, (ie. AM/FM radio, power windows, cruise control).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Fleet vehicles are purchased through a centralized state fund.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Fleet vehicles are purchased by individual agencies with their own funds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The fleet leases some vehicles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The fleet has written criteria regarding the disposal of vehicles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The fleet has minimum disposal criteria, which were developed by internal staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The fleet has minimum disposal criteria based on externally developed or industry standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Vehicles are disposed of based on an internal staff analysis, considering the vehicle's age, condition, mileage, cumulative repair costs, and available funds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Vehicles are disposed of through public auction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Vehicles are disposed of through the state's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

agency for surplus property.

14. Vehicles are disposed of through a direct sale to a private entity. ☐ ☐ ☐ ☐ ☐

15. The fleet believes it is getting a fair market value when vehicles are surplus, auctioned, or sold. ☐ ☐ ☐ ☐ ☐

16. The fleet disposes of vehicles at what mileage range. \_\_\_\_\_

17. The fleet disposes of vehicles after how many years. \_\_\_\_\_

18. The fleet disposes of vehicles once the vehicle has \_\_\_\_\_ . (Use this field if another criterion is used.) \_\_\_\_\_

## Part 8: Maintenance Services

**Instructions:** For questions 1-11, answer by checking the box that best describes the fleet. For questions 12-15, please fill in the blanks with the appropriate number.

	Disagree	Somewhat Disagree	NA	Somewhat Agree	Agree
1. A centralized state garage services the fleet and maintains the fleet vehicles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The fleet documents all maintenance and repairs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The fleet documents preventative maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The fleet uses private vendors to complete some warranty work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |   |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 5. The fleet has written policies regarding the maintenance and repair of vehicles  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. The fleet keeps cumulative repair costs for each vehicle.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. The fleet has a written policy limiting the dollar amount of emergency repairs which may be performed without approval.              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. The state has a preventative maintenance program that is based on manufacturer's recommendations.                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Individual drivers or vehicle users are responsible for initiating and scheduling preventative maintenance?                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. The fleet manager or fleet staff notify vehicle users of when a specific vehicle has preventative maintenance due.                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Simple maintenance and repairs are completed within state facilities, while more complex services are completed by private vendors. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- |   |                          |                          |   |
|---|--------------------------|--------------------------|---|
|   | <b>The State</b>         | <b>Private Vendors</b>   | <b>Both the State and Private Vendors</b> |
| 12. Oil changes are performed predominantly by:           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                  |
| 13. Tire rotations are performed predominantly by:        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                  |
| 14. Two-wheel alignments are performed predominantly by:  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                  |
| 15. Four-wheel alignments are performed predominantly by: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                  |

## *Part 9: Fleet Management Methods and Systems*

**Instructions:** For questions 1-4, please check the box (yes or no) that best answers the question. For questions 5-10, please fill in the blanks with the appropriate answer.

	Yes	No
1. For either permanently assigned vehicles or pooled vehicles, which of the following elements are reflected in the vehicle's records.		
a. Name of the person currently using the vehicle?	<input type="checkbox"/>	<input type="checkbox"/>
b. Program to which vehicle costs are assigned?	<input type="checkbox"/>	<input type="checkbox"/>
c. Purpose for which the vehicle is being used?	<input type="checkbox"/>	<input type="checkbox"/>
d. Justification of need for the vehicle's use?	<input type="checkbox"/>	<input type="checkbox"/>
2. If historical data records are maintained, are the records:		
a. Totally recorded and maintained on computer systems?	<input type="checkbox"/>	<input type="checkbox"/>
b. Totally recorded and maintained on handwritten records?	<input type="checkbox"/>	<input type="checkbox"/>
c. Recorded and maintained partially on computer and partially on handwritten records?	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the state maintain historical data records for each vehicle covered by the vehicle management system?	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
4. Do the historical data records include the following information elements.		
a. Daily trip log?	<input type="checkbox"/>	<input type="checkbox"/>
b. Dates and times of each trip	<input type="checkbox"/>	<input type="checkbox"/>
c. Origin and destination of each trip	<input type="checkbox"/>	<input type="checkbox"/>
d. Mileage of each trip	<input type="checkbox"/>	<input type="checkbox"/>
e. Purpose of the trip	<input type="checkbox"/>	<input type="checkbox"/>
f. Actual operating costs (fuel, oil, routine maintenance, emergency repair)	<input type="checkbox"/>	<input type="checkbox"/>

5. If an electronic fleet management system is used, what is the name of the program?

---

6. Describe the administrative structure that manages the fleet?

## *Part 10: Interagency Cooperation and Legislative Relations*

**Instructions:** For questions 1-11, answer by checking the box that best describes the fleet. For questions 12-15, please fill in the blanks with the appropriate number.

	Disagree	Somewhat Disagree	NA	Somewhat Agree	Agree
1. The fleet has a favorable relationship with the legislature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The fleet has a favorable relationship with the Governor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The fleet has a favorable relationship with other state fleets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The legislature or Governor monitors vehicle purchases.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





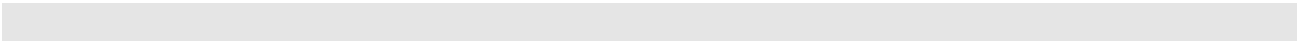


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\_\_\_\_\_

# Appendix D

*Correlation Test*





	<b>R</b>	<b>Slope</b>	<b>Standard error</b>	<b>Intercept</b>	<b>Slope/SE</b>
1. Are these data elements kept?					
Name of person using the vehicle	19.94%	0.0486	0.0949	0.1786	0.5121
Program to which vehicle costs are assigned.	-8.59%	-0.017161	0.096465	0.192805	-0.177896
Purpose for which the vehicle is being used.	25.35%	0.0474	0.0937	0.1653	0.5063
Justification of need for the vehicle's use.	5.42%	0.01056	0.09668	0.1805	0.10924
2. Are fleet records					
Totally recorded and maintained on a computer system.	-12.55%	-0.0234	0.09606	0.199	-0.2438
Totally recorded and maintained on handwritten records	1.76%	0.00344	0.09681	0.18508	0.0355
Recorded and maintained partially on computer and partially on handwritten records.	9.99%	0.0188375	0.0963387	0.176525	0.1955341
3. Fleet maintains historical data records.	-30.23%	-0.080604167	0.09229	0.198804	-0.873351789
4. Do records capture the following					
Daily trip log.	16.84%	0.03477	0.09544	0.17736	0.36431
Dates and times of each trip.	27.05%	0.05828	0.09321	0.17272	0.62524
Origin and destination of each trip.	34.95%	0.06982	0.09072	0.16485	0.76963
Mileage of each trip.	18.21%	0.03923	0.0952	0.17748	0.41209
Purpose of the trip.	24.72%	0.0466	0.09382	0.16732	0.49668
Actual operating costs.	-23.43%	-0.0505	0.09413	0.19991	-0.5363